



COURSE CURRICULUM

Course Title: Wildlife Health

Course Code:

Credit Units: 02

Level: PG

Course Objectives:

The objective of this course is to describe about the diseases and epizootiology, determinants of disease and disease transmission, disease and population dynamics, and major viral, bacterial, protozoan, fungal and parasitic diseases of Indian wild mammals, birds, amphibians and reptiles.

To describe the assessment of health condition, nutritional status in free-ranging populations, and investigation of disease outbreaks, and planning and management of wildlife health programmes.

Prerequisites:

Graduate from Biological science Bachelor degree in Science/Zoology/Botany/Anthropology/Veterinary/Environmental Science/Forestry/ Agriculture/Geography/Natural Resources/Ecology and minor in any of these subjects, and understanding of basics of life sciences.

Course Contents/Syllabus:

	Weightage (%)
Module I	40
Introduction to disease and epizootiology, Determinants of disease and disease transmission, Disease and population dynamics. Review of major viral, bacterial, protozoan, fungal and parasitic diseases of Indian wild mammals, birds, amphibians and reptiles.	

L	T	P/S	SW/FW	TOTAL CREDIT UNITS
2	0	0	0	2

Module II	30
Non-infectious diseases- nutritional diseases, poisoning, stress, shock, capture myopathy, physical trauma. Emerging and re-emerging diseases. Zoonoses. Assessment of condition, health and nutritional status in free-ranging populations.	
Module III	30
Disease control operations, Investigation of disease outbreaks including biological sampling and laboratory analysis, Planning and management of wildlife health programmes.	

Student Learning Outcomes:

Students gain knowledge in several key areas of conservation science:

1. Students learn firsthand about the scientific study of wildlife health and disease as it relates to conservation of one of the world's most endangered mammals. This includes exposure to the principles of epidemiology, public health, conservation biology, disease dynamics, ecosystem function and other topics;
2. students will be exposed to the structure of the Government of India with the rules and regulations that govern in situ conservation programs;
3. Students are part of a multidisciplinary team that includes field biologists, park managers, government officials, non-government scientists and local people – a mix that teaches students the many complex connections that are part of every conservation effort well beyond the investigation of health.

Pedagogy for Course Delivery:

Class room lectures, PowerPoint presentations, Tutorial sessions, Discussions and Interactions and assignments/tests/term papers/seminars

Assessment / Examination Scheme:

Theory L/T (%)	Lab/Practical/Studio (%)	End Term Examination
30%	NA	70%

Theory Assessment (L&T):

Continuous Assessment/Internal Assessment					End Term Examination
Component (Drop down)	Mid-Term Exam	Project	Viva	Attendance	

Weightage (%)	10	10	5	5	70
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References:

1. Wildlife & Disease in India / Sharma, Budh Dev – 2004
2. Understanding and predicting the influence of animal movement on the spread of transboundary animal diseases - Ben Madin (2011) Ph.D. thesis, Murdoch University
3. Leighton F A, Valeix S, Wall R, and Polachek L. 2012. Capacity Development for Wildlife Health Management in Low and Middle Income Countries: A Workshop Work Book. Wildlife Disease Association, Lawrence, KS USA (<http://www.wildlifedisease.org/wda/HOME.aspx>)
4. Examining the Risk of Disease Transmission between Wild Dall's Sheep and Mountain Goats, and Introduced Domestic Sheep, Goats, and Llamas in the Northwest Territories Elena Garde, Susan Kutz, Helen Schwantje, Alasdair Veitch, Emily Jenkins, Brett Elkin. The Northwest Territories Agricultural Policy Framework and Environment and Natural Resources Government of the Northwest Territories, Canada
5. Field Manual of Wildlife Diseases General Field Procedures and Diseases of Birds Biological Resources Division Information and Technology Report 1999–001 Milton Friend and J. Christian Franson, Technical Editors Elizabeth A. Ciganovich, Editor Phillip J. Redman, Design and layout Rosemary S. Stenback, Illustrator U.S. Department of the Interior U.S. Geological Survey, Washington, D.C.
Wildlife health and disease : surveillance, investigation, and management / Markus J. Peterson and Pamela J. Ferro